LISTING OF THE CLAIMS

1. (Previously Presented) A protective apparatus for protecting an electric machine against current overload, comprising:

a current value provision device for providing a present current value with which the electric machine is operated;

a prediction device for determining the thermal motor model *TMM* as a function of the present current value, a predetermined current limit value, and a time, predetermined by the classification of the electric machine, and for predicting an absolute or relative time value for a trigger reserve, in the case of which the thermal motor model reaches a value of one; and

a utilization device for utilizing the time value for the trigger reserve for generating a control signal.

2. (Previously Presented)) The protective apparatus as claimed in claim 1, wherein, when providing a current I_{pres} from the point in time $t = 0$ *on*, *TMM* is given by:

$$TMM = \left[1 - e^{\frac{1}{\tau}}\right] \cdot \frac{I_{pres}}{I_{limit}}$$, where I_{limit} is the current limit value, and t is the predetermined time.

3. (Previously Presented)) The protective apparatus as claimed in claim 1, wherein the thermal motor model is recursively calculatable in the prediction device.

4. (Previously Presented)) protective apparatus as claimed in claim 1, wherein the time value is dynamically calculatable using the present value for the thermal motor model.

5. (Previously Presented)) The protective apparatus as claimed in claim 1, wherein at least one of the prediction device and the utilization device is parameterizable.

6. (Previously Presented)) The protective apparatus as claimed in claim 1, wherein at least one of a disconnection signal and a warning signal are generatale as a control signal in the utilization device.

7. (Previously Presented)) A method for protecting an electric machine against current overload, the method comprising:

provisioning a present current value with which the electric machine is operated;

determining a thermal motor model based on the present current value, a predetermined current limit value and a time predetermined by the classification of the electric machine;

predicting an absolute or relative time value for a temporal trigger reserve as a function of the thermal motor model in which the thermal motor model reaches a value of one;

generating a control signal using the time value; and

driving the electric machine using the control signal.

8. (Previously Presented)) The method as claimed in claim 7, wherein, when providing the present current value I_{pres} from the point in time $t = 0$ on, the thermal motor model is given by:

$TMM = \left[1 - e^{\frac{1}{\tau}}\right] \cdot \frac{I_{pres}}{I_{limit}}$, where I_{limit} is the current limit value and t is the predetermined time.

9. (Previously Presented) The method as claimed in claim 7, wherein the thermal motor model is calculated recursively.

10. (Previously Presented)) The method as claimed in claim 7, wherein the time value is calculated dynamically using the present thermal motor model.

11. (Currently Amended) The method as claimed in claim 7, wherein the process for generating a control signal is parameterized individually.

12. (Previously Presented)) The method as claimed in claim 7, wherein at least one of a disconnection signal and warning signal is generated as a control signal.

13. (Previously Presented)) The protective apparatus as claimed in claim 3, wherein the time value is dynamically calculatable using the present value for the thermal motor model.

14. (Previously Presented) The protective apparatus as claimed in claim 3, wherein at least one of the prediction device and the utilization device is parameterizable.

15. (Previously Presented) The protective apparatus as claimed in claim 3, wherein at least one of a disconnection signal and a warning signal are generatale as a control signal in the utilization device.

16. (Previously Presented) The method as claimed in claim 9, wherein the time value is calculated dynamically using the present thermal motor model.

17. (Previously Presented) The method as claimed in claim 8, wherein the process for generating a control signal is parameterized individually.

18. (Previously Presented) The method as claimed in claim 8, wherein at least one of a disconnection signal and warning signal is generated as a control signal.

19. (Previously Presented) The method as claimed in claim 9, wherein the process for generating a control signal is parameterized individually.

20. (Previously Presented) The method as claimed in claim 9, wherein at least one of a disconnection signal and warning signal is generated as a control signal.

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